Financial Services Practice

Building India

Financing and Investing in Infrastructure

McKinsey&Company

Executive Summary

India's infrastructure build-out envisages investments of close to US$500 billion, with US$430 billion of this in the core transport and utility sectors.[1] About one-fourth of this investment is expected to be met through Public-Private Partnerships (PPP). Successful implementation of this ambitious plan depends on four interdependent factors namely, the creation of adequate projects for tender by government agencies, the uptake of available projects by private sector developers and cash contractors, the financial closure and start of construction, and finally, the execution of projects on-time and within budget. India faces multiple challenges along all these dimensions in its quest to reach the targets set by the Eleventh Plan. To date, India's success across sectors has been mixed. Capacity under construction or fully constructed relative to the Eleventh Plan (an integrated measure of the first three dimensions mentioned above) reveals that only the power sector is on track, achieving 100 percent of planned capacity, while the ports sector is at 85 percent, the airports sector at 75 percent[2] and the roads sector at 50 percent (including the National Highway Development Programme (NHDP) that has achieved only 10 percent of planned capacity).

But even assuming the bottlenecks in project creation, uptake and execution are tackled, India is on course to a deficit of US$150 billion to US$190 billion in financing core infrastructure sectors. Structural impediments in the financial system coupled with the global credit crisis will constrain capital flows to the sector, perpetuating the deficit in core public goods and persistent inefficiencies in the economy. These consequences can be forestalled only by expeditiously reforming the financial sector to eliminate impediments to existing sources of capital, allowing new investor groups into infrastructure projects and adapting innovative mechanisms to channel investment into the sector.

Nevertheless, the infrastructure sector provides a large opportunity for financial sector players, with potential revenues of US$10 billion to US$12 billion between the financial years 2010 and 2014,[3] and a revenue pool of US$25 billion to US$29 billion beyond 2014.[4] Several project models with different risk-return implications are available for capital participation across all core sectors. Success will lie in building a profitable business model that earns a high sustained return on capital.

1 Outlined in the Eleventh Five Year Plan, Planning Commission, Government of India (based on a Re-$ exchange rate of Rs. 41 per US$).

2 Reflects PPP airport projects in Bangalore, Delhi, Hyderabad and Mumbai.

3 The financial year in India is the 12 month period from April 1st to March 31st.

4 In 2008 dollars.

OVERCOMING CHALLENGES IN FUNDING INDIA'S INFRASTRUCTURE

India's infrastructure spending has fallen well short of its economic growth, with the investment ratio[5] declining from 50 between 1988 and 1997 to 38 between 1998 and 2007. In the Eleventh Five Year Plan, the government committed to increasing gross capital formation from 4 to 9 percent of GDP during the Plan period. The massive target set by the Eleventh Plan would amount to 28 percent of the total infrastructure investment planned by emerging markets and is second only to China's planned investments. Further, much of this investment, about one-fourth in core infrastructure, is expected to come from the private sector.

Improving macro-fundamentals, easier access to and attractive fiscal incentives for private and foreign capital, and greater ability to pay user charges as a result of improved economic growth, are boosting private investment in India's infrastructure. However, structural and regulatory barriers that impede the flow of domestic capital into infrastructure— asset liability mismatch and exposure limit issues for banks; the high pre-emption of funds from the banking system; investment restrictions on long-term savings mobilisers, namely insurance, pension and provident funds; the shallowness of the bond market; and constrained supply of External Commercial Borrowings (ECB) —will hamper funding to the sector. Further, the global economic slowdown and rising interest rates make project funding for infrastructure more expensive and financial closure more difficult.

All these factors will create a shortfall of US$150 billion to US$190 billion in capital available for infrastructure projects. While most of the shortfall will occur in debt capital, equity flows to PPP projects will also be threatened by various structural barriers.

To avert a situation that India can ill afford, the government could consider several policy reforms and interventions to stimulate capital flows into infrastructure. Such measures include various steps to remove bottlenecks to flows from existing sources of capital, for example by allowing banks to raise resources through long-term bonds exempt from statutory reserve requirements, and easing norms for insurance companies and pension funds to invest in infrastructure assets. These measures may also include encouraging new investor groups to invest in emerging infrastructure, such as mutual funds, overseas infrastructure funds and pension funds, and replicating other successful mechanisms to channel funds into the sector. In addition, the government could also consider direct financial participation in infrastructure. This could be through refinance support to infrastructure lending by commercial banks, credit enhancement of infrastructure instruments, or direct investment in hybrid debt or equity issued by infrastructure companies through an Asset Management Company (AMC) structure.

5 Investment as a percentage of GDP to the GDP growth rate.

While a combination of these initiatives can significantly reduce the gap foreseen between planned and actual investment, the flow of capital may prove insufficient unless supported by government measures to improve creation, uptake and execution of PPP projects. The government and key nodal agencies must address various challenges to project implementation, including land acquisition, risk allocation and contract enforceability, as a means to improve the risk-return equation for private sector players.

OPPORTUNITIES FOR FINANCIAL SECTOR INTERMEDIARIES

Notwithstanding current structural barriers, financial sector players still have a large and attractive revenue pool to tap. Domestic and foreign financiers can provide a range of products and services across the project life cycle including advisory, lending, transaction banking, debt and equity fund raising, equity investment and general insurance. In addition to potential revenues of US$10 billion to US$12 billion between the financial years 2010 to 2014, ongoing revenue streams beyond 2014 could be from US$25 to US$29 billion.[6] The bulk of the opportunity is concentrated in the power, roads and ports sectors which account for 57 percent of planned spend and 66 percent of the potential revenue opportunity. Financiers must understand the current and future demand–supply equation for each sector as a whole as well as the risk-return positioning of individual sub-sectors.

— **Power:** Despite strong economic growth, India's power sector is under capacity and plagued by inefficiencies in generation, transmission and distribution. Existing generation capacity of ~140 megawatts is sufficient for today's base load, but falls short of peak demand by 16 percent. Bottlenecks in the transmission network and a distribution network plagued by technical and commercial losses only exacerbate the generation shortage. While there are examples of private participation in transmission and distribution, power generation offers the largest opportunity across a range of sub-sectors and project models such as Independent Power Plants (IPPs), captive power plants and merchant power plants. The power sector represents potential revenue pools of US$4.2 billion to US$4.9 billion between the financial years 2010 and 2014, with expected annual revenues of US$1.2 billion to US$1.4 billion in financial year 2014. Apart from project finance, the sector offers high cash management and trade finance revenues.

— **Roads:** India has the second largest road network in the world with 3.5 million kilometres of road and ~500 kilometres of paved road per 1000 square kilometres; the density of roads in India is comparable to developed countries such as the United States. However, India's road quality is well below global standards—only 25 percent of national highways are two or four lanes and close to 90 percent of highways are structurally inadequate to support the

6 In 2008 dollars.

10.2 tonne permissible load per axle that trucks are allowed to carry. The three road sub-sectors combined—national highways, state highways and rural roads—represent a cumulative revenue pool of US$2.4 billion to US$2.8 billion between the financial years 2010 and 2014, with expected annual revenues of US$570 million to US$650 million in financial year 2014. In addition to lending, cash management revenues are high in this sector due to toll collections.

— **Ports:** Port capacity at 600 million megatonnes is already stretched. Major ports are running at 95 percent utilisation and demand is likely to grow to 1,000 million megatonnes by 2012. In addition, efficiency in turnaround times and equipment productivity are below global standards. Three primary sub-sectors combined—major ports, minor ports and connectivity projects—represent a cumulative revenue pool of US$650 million to US$720 million between the financial years 2010 and 2014, with expected annual revenues of US$160 million to US$180 million in financial year 2014.

To successfully tap the available revenue pools, financiers should develop a strong understanding of each sector to assess products needs, timing and investment merit. Financiers will also need to build deep expertise to undertake accurate risk assessment. Skilled and knowledgeable financiers should be able to help promoters mitigate risk using financial products and contract provisions as well as determine when to opt out of a deal. India's infrastructure development programme exhibits relatively less developed risk appreciation and risk mitigation strategies as compared to other countries—regulatory frameworks in India are still evolving, contract enforceability is not as high as in developed nations, PPP projects are yet to go through a full credit cycle and pricing of project risk has been dependent, in large part, on the availability of capital and the banker-promoter relationship. Lack of expertise will leave financiers vulnerable to unforeseen risk over time. Thus, the importance of risk quantification and management measures for infrastructure financiers at both the project and portfolio levels cannot be over-emphasised. Default rates for project financiers range from 30 basis points to 150 basis points for a sample of global project finance banks with seasoned portfolios.[7] In the long run, risk management will be a key differentiator for banks in the infrastructure financing arena.

BUSINESS MODELS FOR SUCCESS IN INFRASTRUCTURE FINANCING

Financiers will also need to consider the key challenge of how to structure their business model to build a high-return business. Infrastructure projects need many financial products and services beyond debt and equity capital. A primary market survey by McKinsey & Company of almost 40 infrastructure developers across eight sectors in India reveals that developers have a variety of product needs, namely: lending and loan syndication, equity capital raising and advisory,

7 2008 global survey on structured finance conducted by McKinsey & Company across 12 banks.

transaction banking and general insurance. The survey suggests that while project developers have different sets of buying factors for each product, on the whole, they exhibit an overwhelming preference for their dominant relationship bank. However, smaller banks and new entrants into infrastructure finance also have opportunities to target this space—about half of the developers surveyed indicated a willingness to consider banks beyond the current top three for their future projects.

Indian banks participating in infrastructure finance are largely debt focused. They can earn Return on Equity (RoE) of 20 to 35 percent by moving up the value chain (compared to 10 to 11 percent plain vanilla RoEs). This will involve capturing an increasing share of the transaction banking and equity advisory/ fund management revenue pool from their lending deals. To tap this wide range of products and services, financiers will need to adapt their business models. Globally, infrastructure financiers have a range of different business models based on their risk appetite, RoE expectation and core capabilities.

To move up the value chain or acquire relationships and scale in India, financiers should consider partnerships. Domestic incumbent banks with a strong funding base and existing corporate relationships can use global or domestic alliances to build specific sector expertise, go beyond participating in syndications to active origination, and participate in the equity side of the project capital structure. For smaller but skilled domestic banks or non-banking finance companies (NBFCs) with a capital-light preference, partnering with some of the larger, balance sheet-based Indian banks will enable an origination and syndication model coupled with advisory. The larger entity could use its balance sheet to take on the loan or serve as a warehouse for future syndication activities, with the smaller entity driving the advisory efforts. Global banks with a strong balance sheet and global footprint can offer an integrated onshore and offshore debt solution by partnering with a domestic project finance arranger. This would also facilitate the exchange of sector expertise, underwriting skills and risk management.

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By proactively selecting sectors, building expertise, quantifying and measuring risk, striking alliances and adapting their business models, financiers can capture the full opportunity represented by a US$10 billion to US$12 billion revenue pool between the financial years 2010 to 2014, and an additional US$25 to US$29 billion in ongoing revenue streams beyond 2014. The pool of potential project opportunities could expand further if India's structural financing problems are resolved through a set of policy measures and direct government interventions.